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EXAMINER

HOLLINGTON, JERMELE M

ART UNIT PAPER NUMBER

2829

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/973,049

Applicant(s)

MIKI, KAZUNOBU

Examiner

Jermele M. Hollington

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims are rejected under 35 U.S.C. 102(b) as being anticipated by Gleason et al (5914613).

Regarding claims 1 and 10, Gleason et al disclose a semiconductor element apparatus [see Figs. 1-3] comprising a stage (chuck 51) on which a semiconductor wafer (46) having semiconductor elements (dies 44) [see Fig. 1 and column 6 lines 30-41] is to be mounted, a probe card (52 of Fig. 2) having a plurality of probe needles (contacts 88 of Fig. 5) opposing the semiconductor wafer (46 or DUT 116 of Fig. 5) and a probe card holder member (probing assembly 42) for holding the probe card (52) and the semiconductor elements (pads 100 of Fig. 5) are tested by bringing the plurality of probes needles (contacts 88) into contact with the semiconductor elements (100) of the semiconductor wafer (46 or DUT 116 of Fig. 5), wherein the probe card (52) has a probe substrate (flexible membrane assembly 72) for supporting the plurality of probe needles (88) [see Fig 5] and a reinforcement member (support element 54) for reinforcing the probe card substrate (72) [via forward support 66] and the reinforcement member (54) has a plurality of mount positions (attachment arm 60) and counter bores [shown but not number in the Figs.] of substantially the same depth and shape [see Fig. 3] in each of the

plurality of mount positions (60) and the probe card substrate (72) is attached to the probe card holder member (42) through the reinforcement member (54) at the counter bores by screws (56).

Regarding claims 2-3, Gleason et al disclose screws (56) [see Fig. 3] having the same length and same type [Allen screws see column 6 line 47] are used in the respective mount positions (60) [see column 6 lines 46-49].

Regarding claim 4, Gleason et al disclose round- head screws [see Fig. 2] having a bulging screw heads are used as screws (56).

Regarding claim 6, Gleason et al disclose the reinforcement member (54) is attaching to the probe card hold member (42) by means of a screw (56) at each of mount positions at respective end sections of a plurality of reinforcement arms (60) and in each of the reinforcement arms (60) a counter bore (shown but not number in the Figs.) narrower than the width of the end section of the reinforcement arms (60) with respect to a width wise direction thereof, as well as in the end section of the reinforcement arm (60).

Regarding claim 7, Gleason et al disclose the reinforcement member (54) has a peripheral section (arm segments 82) having the plurality of mount positions and a central section (forward support 66) formed so as to have a thickness greater than that of the peripheral section (82).

Regarding claim 9, Gleason et al disclose the reinforcement member (54) has a peripheral section (arm segments 82) having the plurality of mount positions and a center section (forward support 66) located at the center of the peripheral section (82) and the reinforcement member (54) and the probe card substrate (flexible membrane 72) are fastened to each other in the center section (66) [see column 7 lines 4-29].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gleason et al (5914613).

Regarding claim 5, Gleason et al disclose all of the claimed invention except screws formed from a magnetic substance. It is well known and a design choice to have screws formed from a magnetic substance where needed (see MPEP 2144.07; *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323(Fed. Cir. 1988)). It would have been obvious and design choice to one of ordinary skill in the art at the time the invention was made to have screws formed from a magnetic substance since with or without the magnetic substance it will perform the same function of attaching together a probe card substrate and reinforcement member as intended for each individual user.

***Conclusion***

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mendenhall et al (4899099), Hatada et al (5089772), Montoya et al (5656943), and Iino (6075373) disclose semiconductor test apparatus for testing a DUT with probe needles.

7. Claim 8 is allowed over the prior art.

8. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 8, the examiner is unable to located a semiconductor element test apparatus having a reinforce member comprising a reinforcement piece for two interconnecting mutually-opposing sides of the frame-shape center section is provided in the center section.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (703) 305-1653. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703) 308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Jermele M. Hollington  
Examiner  
Art Unit 2829

JMH  
May 16, 2003



KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
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